

Remarks/Arguments

Claims 16, 20 – 24, and 27 – 28 remain in this application. Claims 17 – 19, 25 – 26, and 29 – 30 have been canceled.

Independent claims 16 and 24 have been amended in order to advance prosecution on the merits to recite a method for the administration of therapeutic amount of a growth factor protein formulation in the treatment of a patient displaying the symptoms of acute or chronic coronary artery disease comprising the steps of: (a) administering by inhalation therapy at least one dose of an effective amount of a first therapeutic growth factor protein formulation comprising: (i) a growth factor protein selected from the group consisting of FGF-1 and FGF-2, and mixtures thereof; and (ii) PIGF; (b) monitoring one or more clinical indicators of acute or chronic coronary artery disease; (c) determining, based on monitoring the one or more clinical indicators of acute or chronic coronary artery disease, whether an additional dose of a therapeutic growth factor protein formulation is necessary; (d) depending on the results of step c), administering one or more additional doses of a second growth factor protein formulation comprising: (i) a growth factor protein being selected from the group consisting of FGF1 and FGF-2, and mixtures thereof; and (ii) PIGF; and (e) repeating steps b) through d) until there is a clinical indication of amelioration of the symptoms of acute or chronic coronary artery disease in the patient, or until there is a contraindication to continued treatment. The

foregoing amendments are supported by the specification as originally filed at paragraphs [00023], [00026], [00027], and [00030]. Accordingly, no new matter has been added.

Priority

The Examiner has stated that applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows: The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The Examiner has stated that the disclosure of the prior-filed application, Provisional application no. 60/195624 provides support for methods comprising administration of the genus of VEGF, but does not provide motivation to select the species PIGF recited in the instant claims. The Examiner has stated that PIGF is not mentioned in 60/195624, and accordingly, priority for the instant claims is 04/06/2001, the earliest date on which this exact disclosure was filed.

Applicant accepts the above findings and accepts the priority date of 04/06/2001 for the instant application under 35 U.S.C. 120. Applicant notes that under the provisions of 35 U.S.C. 120, the present application “shall have the same effect, as to such invention, as though filed on the date of the prior application,” namely 04/06/2001.

Double Patenting

Claims 16, 20-24, and 27-28 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 9, 11, 12, 13, 14, 15, 20, and 23 of U.S. Patent No. 6,759,386 (6 July 2004) to Franco in view of WO 200156593, filed February 5, 2001.

In order to expedite prosecution of this application, enclosed herewith is a Terminal Disclaimer in the form required by 37 CFR 1.321 (b). The Terminal Disclaimer includes a statement by the applicant certifying that, to the best of his knowledge and belief, title is in the applicant seeking to take action. As such, the Terminal Disclaimer is submitted to be in the proper form required by 37 CFR 1.321. In view of the same, it is submitted that present claims 16, 20-24, and 27-28 should not be subject to rejection based on obviousness-type double patenting over claims 1, 9, 11, 12, 13, 14, 15, 20, and 23 of U.S. Patent No. 6,759,386 (6 July 2004) to Franco in view of WO 200156593, filed February 5, 2001.

Accordingly, reconsideration of the rejection of claims 16, 20 – 24, and 27 – 28 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 9, 11, 12, 13, 14, 15, 20, and 23 of U.S. Patent No. 6,759,386 (6 July 2004) to Franco in view of WO 200156593, filed February 5, 2001 is respectfully requested.

Claim Rejections – 35 USC § 103

Claims 16, 20-24, and 27-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over WO 200156593.

WO 200156593 relates to the prevention and treatment of strokes and ischemic diseases, in particular ischemic cerebral infarction, acute myocardial infarction and chronic heart disease, by means of specific growth factors. More particularly, this invention deals with the use of vascular endothelial growth factor, placenta growth factor or both in pharmaceutical compositions and methods for such prevention or treatment.

The Examiner has stated that WO 200156593 teaches (Example 3, pages 17-18) that treatment with PIGF, VEGF, or both, stimulated the formation of new endothelial-lined vessels (angiogenesis) and the maturation of these coronary vessels by coverage with vascular smooth muscle cells (arteriogenesis) in an animal model of heart disease. The Examiner has stated that these teachings anticipate or at least render obvious the

administration of these factors for the treatment of all conditions recited in the instant claims, as the observed effects would be expected to be beneficial in all cases.

Applicant submits that claims 16, 20-24, and 27-28, as amended, patentably define over the disclosure of WO 200156593. Namely, present claims 16, 20-24, and 27-28 require a method for the administration of therapeutic amount of a growth factor protein formulation in the treatment of a patient displaying the symptoms of acute or chronic coronary artery disease comprising the steps of: (a) administering by inhalation therapy at least one dose of an effective amount of a first therapeutic growth factor protein formulation comprising: (i) a growth factor protein selected from the group consisting of FGF-1 and FGF-2, and mixtures thereof; and (ii) PIGF; (b) monitoring one or more clinical indicators of acute or chronic coronary artery disease; (c) determining, based on monitoring the one or more clinical indicators of acute or chronic coronary artery disease, whether an additional dose of a therapeutic growth factor protein formulation is necessary; (d) depending on the results of step c), administering one or more additional doses of a second growth factor protein formulation comprising: (i) a growth factor protein being selected from the group consisting of FGF1 and FGF-2, and mixtures thereof; and (ii) PIGF; and (e) repeating steps b) through d) until there is a clinical indication of amelioration of the symptoms of acute or chronic coronary artery disease in the patient, or until there is a contraindication to continued treatment. By way

of comparison, WO 200156593 teaches treatment with PIGF, VEGF, or both, but does not teach or suggest the use of FGF-1 and/or FGF-2 together with the use of PIGF in the treatment of coronary artery disease. Significantly, nowhere in the disclosure does WO 200156593 mention the word FGF-1 or FGF-2.

Applicant has found that a growth factor protein formulation that includes at least one growth factor protein selected from the FGF family and at least one growth factor protein selected from the VEGF family, respectively, results in a biological synergy that is more effective in the inducement of angiogenesis *in vitro* and *in vivo*, when compared with a protein formulation that only includes proteins from the FGF family or only includes proteins from the VEGF family. See, especially, the specification as originally filed at paragraph [00023]. Applicant notes that PIGF is a member of the VEGF family of growth factor proteins. See the specification as originally filed at paragraph [00025]. Significantly, WO 200156593 only discloses the use of growth factor proteins selected from the VEGF family, and does not disclose or suggest the use of any growth factor proteins selected from the FGF family. Therefore, it is submitted that WO 200156593 does not disclose or suggest each and every method step required by present claims 16, 20-24, and 27-28.

Accordingly, reconsideration of the rejection of claims 16, 20-24, and 27-28 under 35 U.S.C. 103(a) as being unpatentable over WO 200156593 is respectfully requested.

Conclusion

In view of the amendments to the claims, the Terminal Disclaimer submitted herewith, and the remarks set forth above, it is respectfully submitted that the present application is in allowable condition. Entry of the Terminal Disclaimer, reconsideration of the rejection and allowance of present claims 16, 20 – 24, and 27 – 28 are earnestly solicited.

Respectfully submitted,
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